CONFERENCE ON DISARMAMENT

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LETTER DATED 6 DECEMBER 1993 FROM THE HEAD OF THE DELEGATION OF SWEDEN ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE ON DISARMAMENT TRANSMITTING THE TEXT OF A DRAFT COMPREHENSIVE NUCLEAR TEST BAN TREATY AND ITS ANNEXED DRAFT PROTOCOL

I have the honour to send you, enclosed, a draft Comprehensive Nuclear Test Ban Treaty and its annexed draft Protocol. The draft Treaty is a revision of the draft Treaty text which was submitted on 3 June 1993 (CD/1202).

I should be grateful if the draft could be issued as an official document of the Conference and as a Working Paper of the Ad Hoc Committee on a Nuclear Test Ban.

(Signed) LARS NORBERG
Ambassador
Head of Delegation

GE.93-62829

DRAFT COMPREHENSIVE NUCLEAR TEST-BAN TREATY

The States Parties to this Treaty, hereinafter referred to as the "States Parties",

Convinced that recent fundamental international political changes provide opportunities to take further effective measures against the proliferation of nuclear arms,

Welcoming the conclusion of the START I and START II agreements, envisaging drastic reductions in present strategic nuclear arsenals,

Underlining the importance of the prompt implementation of these and other international disarmament and arms regulation agreements,

Stressing the need for further reductions of tactical and strategical nuclear weapons and their delivery systems,

Declaring their intention to undertake further measures towards nuclear disarmament and against the proliferation of nuclear weapons,

Recalling the determination expressed by the Parties in the Preamble to the 1963 Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water to seek to achieve the discontinuance of all test explosions of nuclear weapons for all time, and to continue negotiations to this end,

Recalling that the Parties in the above-mentioned Treaty undertake to prohibit, to prevent and not to carry out any nuclear weapon test explosion, or any other nuclear explosion in the atmosphere, in outer space and under water,

Convinced that a ban on all nuclear weapon test explosions, and any other nuclear explosions, is an important instrument in preventing the further proliferation of nuclear weapons,

Have agreed as follows:

Article I

Basic Obligations

1. Each State Party undertakes to prohibit, to prevent, and not to carry out, in any environment, any nuclear weapon test explosion, or any other nuclear explosion at any place under its jurisdiction or control.

2. Each State Party undertakes, furthermore, to refrain from causing, encouraging, assisting, preparing, permitting or in any way participating in the carrying out anywhere of any nuclear explosion referred to in paragraph 1 of this Article.

Article II

Implementation

1. The States Parties, in order to achieve the objectives of the Treaty and to ensure the implementation of the provisions of the Treaty, entrust the International Atomic Energy Agency, hereinafter referred to as the "Agency", with verification of compliance with the Treaty, as defined in Article III B.

2. The States Parties undertake to cooperate in good faith with the Agency in the exercise of its functions in accordance with this Treaty.

3. In order to fulfil its obligations under the Treaty, each State Party shall designate or set up a National Authority and shall so inform the Agency upon entry into force of the Treaty for such a State Party. The National Authority shall serve as the national focal point for liaison with the Agency and with other States Parties.

4. Each State Party undertakes to take any measures it considers necessary to prohibit and prevent any activity in violation of the provisions of the Treaty anywhere under its jurisdiction or control.

5. Each State Party shall inform the Depositary of the legislative and administrative measures taken to implement the Treaty.

Article III

Obligations of States Parties and the Agency

A. States Parties.

1. Each State Party undertakes to establish in cooperation with the Agency an effective international and universal monitoring regime. The regime includes the establishment of international monitoring systems based on seismological data, hydroacoustic data and data om radionuclides in the atmosphere and the use of additional relevant techniques.

The arrangements for these international monitoring measures are laid down in the Protocol, annexed to this Treaty.

Each State Party undertakes to establish the necessary facilities to participate in these cooperative measures and through its National Authority to establish the necessary communication channels with the Agency. These arrangements shall be operative on the entry into force of this Treaty.

2. Large non-nuclear explosions carried out by a State Party shall be conducted in accordance with provisions laid down in the Protocol, annexed to this Treaty.

B. The Agency

In the exercise of its functions in accordance with this Treaty, the Agency shall

- coordinate the international monitoring régime including the exchange of seismological data, data on radionuclides in the atmosphere and other data relevant to the monitoring of compliance with the Treaty;

- endeavour, at the request of a State Party, through cooperation with the National Authorities of the States Parties and through other means, to clarify inconsistencies that may occur with regard to events relevant to compliance with the Treaty.

- verify, when inconsistencies are not clarified, compliance with the Treaty through on-site inspection in accordance with Article IV;

ARTICLE IV

Verification

1. Each State Party shall, in order to assist in the interpretation of an event that may be of relevance to the Treaty at any place under its jurisdiction or control, provide such additional information that the Agency might request.

2. Each State Party may use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law to verify compliance with the Treaty.

3. If the nature of an event can not be clarified through the measures specified in paragraphs 1 and 2 of this Article, each State Party is entitled to request an on-site inspection on the territory of any other State Party for the purpose of ascertaining compliance with this Treaty. The requesting State Party shall state the reasons for its request, including the evidence available. Such requests shall be addressed to the Director General of the Agency, who shall bring the matter to the attention of the Board of Governors of the Agency.

4. If the Board of Governors decides to conduct an on-site inspection, the relevant State Party is under obligation to comply with the Board's decision. Such inspections shall be conducted by the Agency, and the report shall be transmitted by the Director-General of the Agency to the Board of Governors and all States Parties. The Board of Governors shall decide on and report any findings of non-compliance essential to the achievement of the objectives of the Treaty or of the spirit of the Treaty, to the Security Council of the United Nations and all States Parties. Decisions on questions mentioned in this paragraph shall be made by the Board of Governors by two-thirds majority of those present and voting. Procedures for such inspections, including the rights and functions of the inspecting personnel, are laid down in the Protocol, annexed to this Treaty.

5. A State Party, on whose territory an event has occurred, may invite the Agency to conduct an on-site inspection.

ARTICLE V

Complaints

Any State Party which finds that any other State Party is acting in breach of obligations deriving from the provisions of the Treaty, may lodge a complaint with the Security Council of the United Nations. Such a complaint shall include all possible evidence confirming its validity.

Article VI

Privileges and Immunities

1. In order to enable them to carry out the functions entrusted to them under this Treaty, the States Parties to this Treaty shall grant privileges and immunities to the Director-General and personnel of the Agency in accordance with the Vienna Convention on Diplomatic Relations of 18 April 1961.

2. Provisions regarding privileges and immunities in connection with on-site inspections are contained in the Protocol, annexed to this Treaty.

Article VII

Status of Protocol

The Protocol to this Treaty constitutes an integral part of the Treaty.

Article VIII

Settlement of Disputes

If any dispute arises between two or more State Parties or between two or more States Parties and the Agency concerning the interpretation or application of the present Treaty, the Parties concerned shall consult among themselves with a view to having the dispute resolved by negotiation, inquiry, mediation, conciliation, arbitration, or other peaceful means of their own choice. Any dispute may, with the consent of all parties to the dispute, be referred to the International Court of Justice for settlement.

Article IX

Amendments

At any time after the entry into force of this Treaty, any State Party may propose amendments to the Treaty or to the annexed Protocol. Any proposal for an amendment shall be communicated to the Depositary, who shall circulate it to all States Parties and seek their views on whether a conference should be convened to consider the proposal. If a majority, that shall not be less than thirty of the States Parties, including the nuclear-weapon States, so agree, the Depositary shall promptly convene a conference to which all States Parties shall be invited. The Conference may adopt amendments proposed, if a majority of the States Parties present and voting, including the nuclear-weapon States, so agree. Amendments shall enter into force for each Party accepting them upon their adoption by the Conference and thereafter for each remaining Party on the date of acceptance of the amendments by such a Party.

Article X

Review of the Treaty

Five years after the entry into force of this Treaty, or earlier if it is requested by a majority of the States Parties to the Treaty by submitting a proposal to this effect to the Depositary, a conference of States Parties to the Treaty shall be held at ....., to review the operation of the Treaty, with a view to assuring that the purposes of the preamble and the provisions of the Treaty are being realized. Such review shall take into account any new scientific and technological developments relevant to the Treaty. At intervals of five years thereafter, a majority of the Parties to the Treaty may obtain, by submitting a proposal to this effect to the Depositary, the convening of further conferences with the same objective of reviewing the operation of the Treaty.

Article XI

Entry into force

1. This Treaty shall be open to all States for signature. Any State which does not sign this Treaty before its entry into force in accordance with this Article may accede to it at any time.

2. This Treaty shall be subject to ratification by Signatory States.

3. This Treaty shall enter into force upon the deposit of instruments of ratification by forty States, including the nuclear-weapon States. For the purposes of this Treaty, a nuclear-weapon State is one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January 1967.

4. For those States whose instruments of ratification or accession are deposited after the entry into force of this Treaty, it shall enter into force on the date of the deposit of their instruments of ratification or accession.

Article XII

Reservations

The Articles of this Treaty, including the Articles of the annexed Protocol which constitutes an integral part of the Treaty, shall not be subject to reservations.

Article XIII

Depositary

1. The Secretary-General of the United Nations shall be the Depositary of this Treaty and shall receive the instruments of ratification and instruments of accession.

2. The Depositary shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each instrument of ratification or of accession and the date of the entry into force of this Treaty and of any amendments thereto, any notice of withdrawal, and the receipt of other notices. He shall also inform the Security Council of the United Nations of any notice of withdrawal.

3. This Treaty shall be registered by the Depositary in accordance with Article 102 of the Charter of the United Nations.

Article XIV

Duration and Withdrawal

1. This Treaty is of a permament nature and shall remain in force indefinitely, provided that in the event of a violation by any party of a provision of this Treaty essential to the achievement of the objectives of the Treaty or of the spirit of the Treaty, every other Party shall have the right to withdraw from the Treaty.

2. Withdrawal shall be effected by giving notice twelve months in advance to the Depositary who shall circulate such notice to all other Parties.

Article XV

Official Languages

This Treaty, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations, who shall send duly certified copies thereof to the Governments of the signatory and acceding States.

In witness whereof, the undersigned, duly authorized thereto, have signed this Treaty.

P R O T O C O L
TO THE
DRAFT COMPREHENSIVE NUCLEAR TEST-BAN TREATY

SECTION I - GENERAL PROVISIONS

Article 1. The International Atomic Energy Agency, hereinafter called the Agency, shall be entrusted with verification functions specified in Articles III B. and IV of the Treaty.

Article 2. Each State Party undertakes, in accordance with Article III A. 1. of the Treaty, to cooperate in good faith with each other and the Agency to facilitate the verification of compliance with this Treaty.

Article 3. The costs for the Agency's verification functions, mentioned in Article 1, shall be borne by the States Parties in accordance with the United Nations scale of assessment.

SECTION II - THE AGENCY

Article 4. In performing its verification functions, mentioned in Article 1, the Agency shall,

- establish and operate an International Data Centre to be the central facility of the international monitoring system based on seismological data, data on radionuclides in the atmosphere, hydroacoustic data, satellite data and other data relevant to the verification of the Treaty. Easy and free access to all services of the Centre shall be granted to all Parties to the Treaty;

- establish and operate networks of seismological and hydro-acoustic stations and stations to monitor radionuclides in the atmosphere;

- conduct on-site inspections and observations relevant to the verification of the Treaty;

- cooperate with National Authorities of the States Parties to resolve uncertainties regarding compliance with the Treaty;

- assist States Parties on other issues of verification of the Treaty.

Article 5. The Agency shall establish, and the Board of Governors of the Agency shall approve, the following Operational Manuals to guide the operation of the various components of the verification system:

- Operational Manual for International Exchange of Seismological Data;

- Operational Manual for International Exchange of Data on Radionuclides in the Atmosphere;

- Operational Manual for International Exchange of Hydroacoustic Data;

- Operational Manual for Satellite Data Processing;

- Operational Manual for International On-site Inspections;

- Operational Manual for On-Site Observations of Non-Nuclear Explosions.

These Manuals are not integral parts of the Treaty and can be changed by the Board of Governors of the Agency. The Agency shall inform the States Parties of any changes in the Operational Manuals.

Article 6. The Agency shall coordinate the operation of the international monitoring network and in particular

- operate the International Data Centre to compile, process and report on seismic data, hydroaucustic data and data on radionuclides in the atmosphere;

- operate a specified network of seismological stations, hydroaucustic stations and stations to measure radionuclides in the atmosphere;

- ensure that the operation of participating seismological stations, hydroacoustic stations and stations to measure radionuclides in the atmosphere and their reporting are in compliance with the respective Operational Manuals;

- provide technical support for the installation and operation of seismological stations, hydroaucustic stations and stations to measure radionuclides in the atmosphere;

- compile and evaluate results and experiences of the operation of the monitoring network.

Article 7. The Agency shall assist States Parties in utilizing satellite data in order to clarify seismic and other events in relation to this Treaty. The Agency shall operate the International Data Centre to compile, process and report on satellite observations, provided by States Parties or obtained from other sources.

Article 8. The Agency shall receive, compile and report to all States Parties any additional information that a State Party may provide to assist in the interpretation of an event which has occurred on its territory.

The Agency shall forward requests for information made by any State Party to any other State Party on any event relevant to this Treaty occurring on the territory of the latter State. The Agency shall receive, compile and report on any information received in response to such requests.

Article 9. The Agency shall facilitate consultations among States Parties to resolve issues related to the verification of the Treaty.

Article 10. The Agency shall, as specified in the Operational Manual for On-Site Observations of Non-Nuclear Explosions, mentioned in Article 5, conduct on-site monitoring of non-nuclear explosions in excess of 500 tons TNT equivalent, and report the result of such observations to the States Parties. The Agency shall also compile and distribute a monthly list of reported non-nuclear explosions in excess of 100 tons TNT equivalent. The Agency shall also conduct routine inspections at sites which States Parties have declared to be routinely used for the conduct of non-nuclear explosions in excess of 100 tons TNT equivalent.

Article 11. An Advisory Board of international experts shall be established by the Board of Governors of the Agency to provide scientific expertise on verification measures and to assist the Board of Governors in evaluating the methodology and the scientific quality of the procedure used and in assessing the value of new methods to be considered for the verification of this Treaty and which the Board of Governors may wish to report to the Review Conference, mentioned in Article IX of the Treaty.

SECTION III - THE GLOBAL MONITORING SYSTEM

Article 12. Each State Party undertakes to participate in the establishment and the operation of an international monitoring system. This obligation includes the establishment and operation of a two-tiered network of high quality seismological stations. The first tier, referred to as a network of Alpha stations, is established and operated by the Agency and provides uninterrupted data transmitted on-line to the International Data Center. The second tier, referred to as a network of Beta stations, is established and operated by the States Parties and provides data in near real time upon request by the International Data Center.

The States Parties are also obliged to participate in the establishment and operation of a network of high quality stations to measure radionuclides in the atmosphere. The stations are established and operated by the Agency and provide data promtly to the International Data Centre.

The States Parties are also committed to the establishment and operation of a network of high quality hydroacoustic stations in the oceans. These stations are established and operated by the Agency and provide uninterrupted data transmitted on-line to the International Data Center.

Article 13. Each State Party shall have the right to receive all data and information available from the International Monitoring Systems and shall make the necessary arrangement with the Agency through its National Authority.

Article 14. The Agency shall, in cooperation with the States Parties, establish and operate a specified network of high quality seismological stations. This network consists initially of the stations specified in Table 1, annexed to this Protocol. These stations shall fulfill the technical and operational requirements summarized in table 2 and further specified in the Operational Manual for International Exchange of Seismological Data. Uninterrupted data from the Alpha stations shall be transmitted on-line to the International Data Center.

Article 15. The Agency shall control the quality of the network of Alpha stations and evaluate its overall performance. The Board of Governors of the Agency may amend the network by technically upgrading stations and by adding or deleting stations in the annexed Table 1, which is not an integral part of the Treaty.

Article 16. The Agency shall make the necessary legal and other arrangements with the States Parties to establish and operate one or several Alpha stations on its territory. For an existing facility, a State Party shall give the Agency authority to use the station as an Alpha station as specified in the Operational Manual for International Exchange of Seismological Data and to make necessary changes in the equipment and the operational procedures to meet these requirements. A State Party shall cooperate with the Agency to establish a new station at a site to be agreed upon. The State Party shall provide the required land for the station free of charge and cooperate with the Agency in establishing the station and the infrastructure needed to support it. A State Party shall also transfer authority to operate the station or stations to the Agency and cooperate with the Agency in the routine operation.

Article 17. To supplement the Alpha network, a number of additional high quality stations referred to as Beta stations shall be established. The Beta stations to be used initially are listed in Table 3, annexed to this Protocol. The Beta stations shall be established and operated by the State Party on which territory it is situated. The Agency shall, if requested, provide technical assistance to a State Party in this regard. The Beta stations shall meet the technical and operational requirements specified in the Operational Manual for International Exchange of Seismological Data. Data from the Beta stations is to be requested by the International Data Center and shall be immediately available through on-line computer connections.

Article 18. The Agency shall control the quality of the network of Beta stations and evaluate its overall performance. The Board of Governors of the Agency may amend the network by adding or deleting stations in the annexed Table 3, which is not an integral part of the Treaty.

Article 19. The International Data Centre shall routinely receive all seismological data contributed to the international exchange by its participants, process and distribute these data to all participants within two days, store all data contributed by participants as well as the results of the processing at the Centre. The procedures to be used at the Centre are laid down in the Operational Manual for International Exchange of Seismological Data. The Centre shall further coordinate requests for additional seismological data from one State Party to another Party and make such data available to all States Parties.

Article 20. Each State Party is encouraged to assist in the assessment of the nature of the seismic events located by the International Data Centre by contributing any additional information available about events located in its own territory.

Article 21. The Agency shall, in cooperation with the States Parties, establish and operate a specified network of high quality stations to measure radionuclides in the atmosphere. This network consists initially of the stations specified in Table 4, annexed to this Protocol. These stations shall fulfill the technical and operational requirements summarized in Table 5 and further specified in the Operational Manual for International Exchange of Data on Radionuclides in the Atmosphere.

Article 22. The Agency shall control the quality of the network of stations to measure radionuclides in the atmosphere and evaluate its overall performance. The Board of Governors of the Agency may decide to amend the network by adding or deleting stations in the annexed Table 4, which is not an integral part of the Treaty.

Article 23. The Agency shall make the necessary legal and other arrangements with the States Parties to establish and operate one or several stations on its territory to measure radioactivity in the atmosphere. For an existing facility a State Party shall give the Agency authority to use the station as a station to measure radionuclides in the atmosphere as specified in the Operational Manual for International Exchange of Data on Radionuclides in the Atmosphere and to make necessary changes in the equipment and the operational procedures to meet these requirements. A State Party shall cooperate with the Agency to establish a new station at a site to be agreed upon. The State Party shall provide the required land for the station free of charge and cooperate with the Agency in establishing the station and the infrastructure needed to support it. A State Party shall also transfer authority to operate the station or stations to the Agency and cooperate with the Agency in the routine operation.

Article 24. In addition to routinely submitted measurements, each State Party may provide any other relevant measurement on radionuclides in the atmosphere. Each State Party may also request additional data from a third party through the Agency. The procedures for making such requests are laid down in the Operational Manual for International Exchange of Data on Radionuclides in the Atmosphere.

Article 25. The International Data Centre shall receive all measurements on radionuclides in the atmosphere contributed to the international exchange by its participants and routinely process these measurements according to established procedures. The Centre shall, at the request by a State Party, evaluate an observed release of radionuclides in the atmosphere as well as the time and location of the source. In this analysis, relevant wind trajectories obtained from meteorological data shall be used. The results of the analysis shall be distributed to all participants within one week, and the records thereof be kept at the Centre. The procedures to be used in the analysis at the Centre are laid down in the Operational Manual for International Exchange of Data on Radionuclides in the Atmosphere. The Centre shall also coordinate requests for additional measurements from one State Party to another and circulate the information obtained as a result of such requests.

Article 26. The Agency shall, in cooperation with the States Parties, establish and operate a specified network of high quality hydroacoustic stations. This network consists initially of the stations specified in Table 6, annexed to this Protocol. These stations shall fulfill the technical and operational requirements summarized in Table 7 and further specified in the Operational Manual for International Exchange of Hydroacoustic Data. Uninterrupted data from the stations shall be transmitted on-line to the International Data Center.

Article 27. The Agency shall control the quality of the hydroacoustic stations and evaluate their overall performance. The Board of Governors of the Agency may decide to amend the network by adding or deleting stations in the annexed Table 6, which is not an integral part of the Treaty.

Article 28. A State Party shall, at the Agency's request, cooperate with the Agency in establishing and operating one or several hydroacoustic stations on its territory. For an existing facility, a State Party shall give the Agency authority to use the station as an hydroacoustic station as specified in the Operational Manual for International Exchange of Hydroacoustic Data and to make necessary changes in the equipment and the operational procedures to meet these requirements. A State Party shall cooperate with the Agency to establish a new station at a site to be agreed upon. The State Party shall provide the required land for the station free of charge and cooperate with the Agency in establishing the station and the infrastructure needed to support it. A State Party shall also transfer authority to operate the station or stations to the Agency and cooperate with the Agency in the routine operation.

Article 29. The International Data Centre shall routinely receive data from hydroacoustic stations, process and distribute these data to all participants within two days, store all data contributed by participants as well as the results of the processing at the Centre. The procedures to be used at the Centre are laid down in the Operational Manual for International Exchange of Hydroacoustic Data.

Article 30. Each State Party undertakes to make satellite image data available on terms to be agreed by the Agency. The Agency shall, upon request, assist States Parties in the processing of satellite image data to facilitate the interpretation of events relevant to this Treaty. The procedures to be used by the Agency are laid down in the Operational Manual for Satellite Data Processing.

Article 31. The Agency shall facilitate cooperation among States Parties in using additional means of verification which any State Party may find useful. The Agency shall receive, compile and circulate any data relevant to the verification of this Treaty which any State Party makes available.

Article 32. The Agency shall, in consultation with the States Parties, provide technical support to establish, operate and maintain such additional means of verification.

Article 33. Additional means of verification of compliance with this Treaty may include acoustic and ionospheric measurements in the atmosphere.

SECTION IV: PROCEDURES FOR ON-SITE INSPECTIONS AND MONITORING

PART 1: Procedures for On-Site Inspections

Article 34. The basic rules for verification through on-site inspection are laid down in Article IV of this Treaty.

Article 35. The purpose of an international on-site inspection is to verify compliance with the Treaty. A team of inspectors (hereinafter referred to as the Inspection Team) shall be dispatched by the Agency and shall present a report to the Board of Governors of the Agency on the observations made during the inspection.

Article 36. The Inspection Team shall begin its inspection in the specified area to be inspected not later than seven days after the Board of Governors of the Agency has decided to conduct an inspection. This area must be continuous and not exceed 1.000 km^2 or a distance of 50 km in any direction. An inspection shall normally not exceed seven days after the arrival of the Inspection Team at the site in the territory of the State Party to be inspected.

Article 37. In accordance with the Agency's basic rights to use its own communication systems and means of transport and to take samples and bringing such samples out of the inspected country, the Inspection Team shall, during an international on-site inspection, be entitled to

- conduct visual inspections of the area from the air and on the ground;

- conduct inspections of the area using infrared means of observation from the air and on the ground;

- take photographs in the visual and infrared parts of the spectrum from the air and on the ground;

- measure radiation and levels of radioactivity in the atmosphere above the area, at ground level and in water;

- conduct temporary seismological measurements in the area.

Article 38. The Director-General of the Agency shall notify the inspected State Party not less than 12 hours prior to the planned arrival of the Inspection Team at the point of entry as defined in the Manual.

Article 39. An international on-site inspection shall be carried out by the personnel and experts of the Agency. The rules and detailed procedures for such on-site inspections are laid down in the Manual for International On-Site Inspections.

At all times while the inspecting personnel are in the territory of the State Party to be inspected, their persons, property, personal baggage, archives and documents as well as their temporary official and living quarters shall be accorded the same privileges and immunities as provided in the Vienna Convention on Diplomatic Relations to the persons, property, personal baggage, archives and documents of diplomatic agents as well as to the premises of diplomatic missions and private residences of diplomatic agents.

Without prejudice to their privileges and immunities, it shall be the duty of the inspecting personnel to respect the laws and regulations of the State in the territory of which the inspection is to be carried out, as long as such laws and regulations are not in conflict with the proper exercising of the rights and functions provided for by the Treaty and this Protocol.

PART 2: Procedures for On-Site Monitoring of Non-Nuclear Explosions

Article 40. For an explosion with a yield exceeding 500 tons TNT equivalent or any group of explosions with an aggregate yield exceeding the same limit, the State Party conducting such an explosion shall notify the Agency not later than 15 days prior to the event. This notification shall include

- the time, location, purpose and yield of the explosion;
- a full description of the event, including a timetable for loading the charge;
- any other relevant information that a State Party wishes to submit.

Article 41. A State Party conducting an explosion with a yield exceeding 100 tons but not exceeding 500 tons TNT equivalent shall provide the Agency with information on such an event not later than seven days after the explosion.

Article 42. Personnel from the Agency shall monitor on-site the preparations for, and the detonation of, any non-nuclear explosion with a yield exceeding 500 tons of TNT equivalent.

Based on the information provided by the State Party conducting the explosion, the Director-General of the Agency shall decide from what date observers shall follow the preparation work. The on-site observation shall include the conduct of the explosion and observation of its result. The detailed rules and procedures are laid down in the Operational Manual for On-Site Monitoring of Non-Nuclear Explosions.

Article 43. A State Party, which regularly conducts explosions with yields exceeding 100 tons TNT equivalent within a limited area, e.g. a mine, might establish a declared site for non-nuclear explosions. In the declaration the State Party shall submit to the Agency a description of the planned explosive activities, the purpose of the explosions and of the site itself. A declared site shall be open to on-site observation by the Agency at any time and the Agency might place on-site recording equipment at the site as defined in the Operation Manual for On-Site Monitoring. For explosions at declared sites a State Party is not obliged to provide information prior to or after an explosion as specified in articles 40 and 41.

Article 44. The personnel conducting the on-site monitoring shall be allowed to follow the preparation of the explosion, including the loading of the charge or charges. They should further be allowed to take pictures and to make measurements of radiation and levels of radioactivity in the air and in water in the vicinity of the event, prior to and after the explosion.

Article 45. The Agency shall establish a factual report of each non-nuclear explosion monitored and submit the report to all States Parties and to the Board of Governors of the Agency.

Article 46. On-site monitoring of a non-nuclear explosion shall be carried out by personnel and experts of the Agency. The rules and detailed procedures for such on-site monitoring are laid down in the Manual for On-Site Observations of Non-Nuclear Explosions.

At all times while the monitoring personnel are present in the territory of the State Party to be inspected or in a territory under the jurisdiction or control of that State party, their persons, property, personal baggage, archives and documents as well as their temporary official and living quarters shall be accorded the same privileges and immunities as provided in the Vienna

Convention on Diplomatic Relations to the persons, property, personal baggage, archives and documents of diplomatic agents as well as to the premises of diplomatic missions and private residences of diplomatic agents.

Without prejudice to their privileges and immunities, it shall be the duty of the monitoring personnel to respect the laws and regulations of the State in whose territory the inspection is to be carried out, as long as such laws and regulations are not in conflict with the proper exercising of the rights and functions provided for by the Treaty and this Protocol.

Table 1

INITIAL LIST OF ALPHA STATIONS

	Station	Code	Location	Configuration
1	NORSAR, NORESS, Norway	NORO, NR	61.040, 11.215	array
2	ARCESS, Norway	ARAO	69.535, 25.506	array
3	Spitsbergen	SPAO	78.178 16.370	array
4	FINESS, Finland	FIAO	61.444 26.079	array
5	GERESS, Germany	GEC2	48.836, 13.708	array
6	Peleduy, Russia	PDYO	58.0 114.0	array
7	Norilsk, Russia	XNS(NRIO7)	69.400, 88.100	array
8	Zalesovo, Russia	ZAL	53.940 84.805	3-C
9	Khabaz, Russia	KBZU	43.729, 42.898	array
10	Eastern Siberia, Russia	XES, SEY	62.9, 152.4	3-C
11	Aktubinsk, Kazahkstan	AKTÜ	50.434, 58.018	regional array
12	Alibeck, Turkmenistan	GEYO	37.930 58.118	regional array
13	Ulumuchi, China	WMO	43.821, 87.695	3-C
14	Eastern China	ENHO	30.272, 109.487	regional array
15	Hailar, China	HIA	49.267, 119.742	3-C
16	Pakistan	PAKO	33.650 73.252	regional array
17	Matsushiro, Japan	MAT	36.542, 138.207	regional array
18	Indonesia	XIN	-2.5, 103.4	3-C
19	New Guinea	XNG	-5.0, 140	3-C
20	Alice Springs, Australia	ASAR	-23.666, 133.905	Teleseismic array
21	Warramunga, Australia	WRA	-19.944, 134.341	Teleseismic array
22	Stephens Creek, Australia	STK	-31.882, 141.592	3-C
23	Cool, Australia	COOL	30.883, 121.145	3-C
24	Mawson, Antarctica	MAW	-67.604, 62.871	3-C
25	Korean Research Array	XKOO	37.128	Teleseismic array
26	Thailand	XTHO	19.99	Teleseismic array
27	Sonseca, Spain	ESLA	39.675, -3.965	Teleseismic array
28	Turkey	XTUO	39.34	Teleseismic array
29	Ivory Coast	DBIC	6.670, -4.856	3-C
30	Banqui, Central African Rep.	BGCA	5.176, 18.424	3-C
31	Lobatse, Botswana	LBTB	-25.015, 25.597	3-C
32	Boshof, South Africa	BOSA	28.613, 25.416	Regional array
33	Luxor, Egypt	LUXO	26.0, 33.0	Regional array
34	Nairobi, Kenya	NAI	-1.274, 36.804	3-C

35	Northern Africa	XAF, TAM	22.8, 5.5	3-C
36	Paso Flores, Argentina	PLCA	-40.731, -70.550	3-C
37	Villa Florida, Paraguay	CPUP	-26.331, -57.329	3-C
38	La Paz, Bolivia	LPAZ	-16.288, -68.131	3-C
39	Brasilia, Brazil	BDFB	-16.644, -48.014	Regional array
40	Northern South America	XSA, ROG?, PSO?	4.6, -74.0	3-C
41	Gauribidanur, India	GDA	13.604, 77.436	Teleseismic array
42	South. Pole, Antarctica	SPA	-90.0, 0.0	3-C
43	Vanda, Antarctica	VNDA	-77.519, 161.846	3-C
44	Lajitas, Texas	LTXO	29.334, -103.667	Regional array
45	Pinedale, Wyoming	PINO	42.780, -109.560	Teleseismic array
46	Goldstone, Calif	GSC	35.302, -116.805	3-C
47	Newcomb, New York	NCB	44.0, -74.0	3-C
48	Powhattan, Arkansas	POW	36.152, -91.185	3-C
49	North pole, Alaska	NPO	64.771, -146.886	3-C
50	Yellowknife, NW Territories	YKA	62.493, -114.605	Teleseismic array
51	Central Canada	XCC	55, -102	3-C
52	Eastern Canada	XEC	50.5, 69.0	3-C
53	Blue Ice, Greenland	ILG	79.178, -39.370	3-C

Table 2

STATION REQUIRMENTS FOR Alpha STATION

Category	Requirment
Pass Band	02-20 Hz (Alpha and Beta)*
Seismometer Noise	10 dB below Peterson low earth noise model
Calibration	within 5% in amplitude and 5^0 in phase
Sample Rate	40 samples per second (±50 µs)
Resolution	18 dB below Petersons low noise model
Sensitivity	200.../nm @ 3 Hz
System Noise	10 dB below Petersons low earth noise curve
Dynamic Range	126 dB
Lincarity	90 dB over the pass band
Timing Accuracy	1 ms (Network standard timing required)
Operating Temperature	-10^0 C to 45^0 C
Authentication	required
State of Health	a minimum of clock status, calibration status and vault status
Format	must be one of the official GSE formats
Protocol	TCP/IP (Beta)
Delay in Transmission	< 15 seconds
Data Frame Length	< 1 second
Data access	Priority given to IDC, then NDC
Disk Buffer	7 days
Data Availibility	greater than 99%
Timely Data Transmission	greater than 98%
Station Location known	known within 100 meters relative location of array elements to within 1 meter
Seismometer Orientation	known within 1 degree

* 8.0 hertz for stations with "unique" capabilities

Table 3

Initial list of Beta Stations (to be established)

Table 4

initial list of Station to measure radioactivity in the atmosphere (to be established)

Table 5

Requirments for stations to measure radioactivity in the atmosphere (to be established)

Table 6

List of Hydroacoustic stations (to be established)

Table 7

Requirements for Hydroacoustic stations (to be established)